



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/532,937

04/28/2005

Shuji Doi

Q87467

3089

23373 7590 06/11/2008
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

06/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/532,937 | Applicant(s) DOI ET AL. | |
| | Examiner Marie R. Yamnitzky | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-11 and 23-30, drawn to a polymer compound comprising a repeating unit of formula (1) or (2), and various products comprising the polymer compound.

Group II, claim(s) 12-15, drawn to a compound represented by formula (16-1) or (16-2).

Group III, claim(s) 16, drawn to a compound represented by formula (19).

Group IV, claim(s) 17, drawn to a method of making a compound.

Group V, claim(s) 18, drawn to a method of making a compound.

Group VI, claim(s) 19, drawn to a method of making a compound.

Group VII, claim(s) 20, drawn to a compound represented by formula (23-1), (23-2), (23-3), (24-1), (24-2) or (24-3).

Group VIII, claim(s) 21, drawn to a compound represented by formula (25).

Group IX, claim(s) 22, drawn to a method of making a compound.

The inventions listed as Groups I-IX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature in common to the Groups is the chemical structure of a fused ring structure comprising two Ar groups directly bonded to each other, and also indirectly bonded to each other via two X groups wherein the two X groups are not identical. This fused ring structure does not define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. For example, JP 06-122874, cited by applicant in the IDS filed

Art Unit: 1794

April 28, 2005, discloses compounds having the fused ring structure (e.g. see the formula on page 3 of the Japanese language document), and US 2004/0131886 A1 to Morrocco, III et al. discloses polymers having the fused ring structure (e.g. see paragraphs [0013]-[0014] and repeating units II and III wherein A and/or B may be $-N=CR_1-$). Accordingly, since there is no technical feature in common to the Groups that defines a contribution over the prior art, the inventions listed as Groups I-IX lack unity of invention.

This application also contains claims directed to more than one species of the generic inventions of Group I, Group II and Group VII. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

For Group I: Various different polymers comprising a repeating unit of formula (1) wherein X^1 and X^2 are selected from those set forth in claim 1 and $X^1 \neq X^2$, or comprising a repeating unit of formula (2) wherein X^3 and X^4 are selected from those set forth in claim 1 and $X^3 \neq X^4$ and, where the polymer comprises a repeating unit in addition to the unit of formula (1) or (2), various different polymers comprising the unit of formula (1) or (2) and further comprising a repeating unit represented by one of formula (5), (6), (7) or (8) wherein each of the variables in formulae (5), (6), (7) and (8) is selected from one of the possibilities set forth in claim 6. (For example: a polymer comprising a repeating unit of formula (1) wherein one of X^1 and X^2 is O and the other is S is one species; a polymer comprising a repeating unit of formula (1) wherein one of X^1 and X^2 is O and the other is $C(=O)$ is another species; a polymer comprising a repeating unit of formula (2) wherein one of X^3 and X^4 is N and the other is B is another species; etc.)

For Group II: Various different compounds represented by formula (16-1) having different combinations of X and Y variables, the different compounds represented by formula (16-2) having different combinations of X, Y and Z variables, wherein the variables represent atoms or groups selected from those specified in claim 12.

For Group VII: Various different compounds represented by one of the formulae shown in claim 20 having different combinations of X and Y variables, and Z (where present), wherein the variables represent atoms or groups selected from those specified in claim 20.

If the invention of Group I, Group II or Group VII is elected, applicant is also required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election. Applicant is also requested to select an ultimate species (polymer or compound, as appropriate) to be used as the starting point for search and examination purposes.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

For Group I: claims 1, 9 and 23-30 corresponds to all species, and each of the other claims of Group I corresponds to more than one, but not all, species.

For Group II: claim 12 corresponds to all species, and each of the other claims of Group II corresponds to more than one, but not all, species.

For Group VII: claim 20 corresponds to all species.

The following claim(s) are generic:

For Group I: claims 1, 9 and 23-30 are generic.

For Group II: claim 12 is generic.

For Group VII: claim 20 is generic.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

At least some of the combinations of variables in the different formulae do not provide a chemical structure that defines a contribution over the prior art, and all alternatives do not have a common property or activity, or belong to a recognized class of chemical compounds.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Art Unit: 1794

Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

/Marie R. Yamnitzky/
Primary Examiner, Art Unit 1794

MRY
June 09, 2008